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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,727	08/09/2002	Colin Robert Willis	41577/266144	5079

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EXAMINER

PADGETT, MARIANNE L

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/018,727

Applicant(s)

WILLIS ET AL.

Examiner

Marianne L. Padgett

Art Unit

1762

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 30 December 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1-4, 6, 7, 12 and 21.  
Claim(s) withdrawn from consideration: 8 & 13-20.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

  
**MARIANNE PADGETT  
PRIMARY EXAMINER**

Continuation of 3. NOTE: The limitation of "the average power of the pulsed plasma discharge is less than 0.05" W/cc has been amended into the independent claim from claim 6, and while the limitation itself has been generally previously discussed, it has not been discussed with respect to claims 3-4, 12 and 21 from which it did not depend, nor did this average power density previously relate to pulsed plasmas applied to compounds of the formula IA, thus may be considered to effectively create new issues. For example, whether or not this average power density may be considered to provide an unobvious critically significant limitation for all or any of the compounds it was not previously necessarily applied to must be considered. However, applicant's arguments which appear to attempt to show this lack clarity as discussed below, with respect to the actual claim limitation as well as with respect to support for their arguments in the specification.

Continuation of 5. Applicant's reply has overcome the following rejection(s): Removes 112, first rejection by deleting the duty cycle limitation from the independent claim.

Continuation of 11. does NOT place the application in condition for allowance because: First as previously noted, the units describing applicants' "average power" are actually units of power density, and while the applied references do not provide values of power density per se, Timmons et al. was previously noted to provide teachings on routine experimentation to provide an effective low power plasma in columns 7-8. Particularly see therein lines 28-45 in column 7, which discuss how the volume of the reactor chamber affects power density in plasmas of like power, stating "large reaction volume at a given applied power would also provide increase retention of monomer functional groups, as this variation in effect decreases the power density during plasma polymerization processes", thus from the teachings of Timmons et al., it is considered that it would remain clear to one of ordinary skill in the art to employ routine experimentation to adjust one's power density for the particular reagents employed, so as to provide desired retention of monomer functional groups as taught.

At the bottom of page 7 in applicant's remarks applicants allege that Timmons et al. teaches away from "low pulsed plasma discharge", however this "low" has no clear meaning & their following discussion concerning pulsed low duty cycles is irrelevant to the independent claims as the unsupported duty cycle ranges have been deleted from the claims and are not relevant to the newly amended average power density limitation (called average power) in the independent claim. At the top page 8, applicants discuss depositions using "pulses of extremely low mean power (0.04 W)" and refer to examples 4 & 5 on page 9, however none of the examples on pages 9-10, i.e. examples 1-9, have any teachings of "mean power", as they all provide only a "peak power = 40 W", which even given the ON and OFF times of the plasma, does not provide sufficient information to calculate an arithmetic mean power as peak power is the highest value reached providing no other information on instantaneous power values all ON period, nor would such a value have any relevant meaning with respect to the proposed claim limitations, which relate to units of power density, which require one to know the plasma volume. The examiner notes that the claimed  $< 0.05$  W/cc was introduced on page 6, lines 10-12, where the "average power of the pulsed plasma discharge" would in context more properly read --average power density... --, however the context of the specification would imply that this is the average power over the duration of the pulses only, because that's when the discharge is taking place, but applicant's arguments concerning duty cycle, which are not relevant to any claim except 7, suggest averaging over both the pulses on-time and off time. As the examiner noted no teachings of plasma volume for the particular example of (20  $\mu$ s on)/(10,000- 20000  $\mu$ s off), she sees no way to relate the claimed plasma power density values to the exemplary 40 W peak power used with these exemplary ON/OFF times, which appears to be what applicants are basing their arguments upon, although exactly how is not clear, thus these arguments are not at all convincing.

